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10/786,028	02/26/2004	Wen-Wei Su	BHT-3249-9	5185
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TROXELL LAW OFFICE PLLC			PYO, KEVIN K	
SUITE 1404			ART UNIT	
5205 LEESBURG PIKE			PAPER NUMBER	
FALLS CHURCH, VA 22041			2878	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/786,028	<b>Applicant(s)</b> SU, WEN-WEI	
	<b>Examiner</b> Kevin Pyo	<b>Art Unit</b> 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-247 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-247 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Group I        Claims 1-221 are directed to the details of first type of a detecting device  
(identification mark means is on a rotating shaft)

Group II        Claims 222-247 are directed to the details of second type of a detecting  
device (sensing device is on a rotating shaft)

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

2. **If invention I is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia        reflective type detection (claims 3-86, 179-184, 192-193/180 and  
201-206).

Ib        transmissive type detection (claims 87-171, 185-191, 196, 192-193/185,  
197-199/196, 207-213 and 214-215/207).

Ic        photographic detection (claims 172-177, 194, 195, 197-199/195 and 216-221)

Currently, claims 1, 2, 178, 192-193/178, 200 and 214-215/200 are generic.

3. **If invention Ia is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

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Ia-1 first type of identification mark arrangement (claims 5, 7-86/5, 179-184, 192-193/180 and 201-206)

Ia-2 second type of identification mark arrangement (claims 6 and 7-86/6)

Currently claims 3 and 4 are generic.

I. **If invention [Ia-1] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-1-1 first type of identification means (claims 7-14/5, 179-181, 192-193/180)

Ia-1-2 second type of identification means (claims 14-20/5, 182-184)

Ia-1-3 third type of identification means (claims 21-36/5, 201-206)

Ia-1-4 fourth type of identification means (claims 37-47/5)

Ia-1-5 fifth type of identification means (claims 48-58/5)

Ia-1-6 sixth type of identification means (claims 59-86/5)

**If invention [Ia-1-3] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-1-3-1 first type of color portions (claims 22-26/5 and 201-203)

Ia-1-3-2 second type of color portions (claims 27-31/5)

Ia-1-3-3 third type of color portions (claims 32-36/5 and 204-206)

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**If invention [Ia-1-4] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-1-4-1 first type of calibration means (claim 44/5)

Ia-1-4-2 second type of calibration means (claim 45/5)

Ia-1-4-3 third type of calibration means (claim 46/5)

**If invention [Ia-1-5] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-1-5-1 first type of calibration means (claim 55/5)

Ia-1-5-2 second type of calibration means (claim 56/5)

Ia-1-5-3 third type of calibration means (claim 57/5)

**If invention [Ia-1-6] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-1-6-1 first type of color portions (claims 60-68/5)

Ia-1-6-2 second type of color portions (claim 69-77/5)

Ia-1-6-3 third type of color portions (claim 78-86/5)

**If invention [Ia-1-6-1] is elected, applicant is further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.**

Ia-1-6-1-1      first type of calibration means (claim 65/5)

Ia-1-6-1-2      second type of calibration means (claim 66/5)

Ia-1-6-1-3      third type of calibration means (claim 67/5)

**If invention [Ia-1-6-2] is elected, applicant is further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.**

Ia-1-6-2-1      first type of calibration means (claim 74/5)

Ia-1-6-2-2      second type of calibration means (claim 75/5)

Ia-1-6-2-3      third type of calibration means (claim 76/5)

**If invention [Ia-1-6-3] is elected, applicant is further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.**

Ia-1-6-3-1      first type of calibration means (claim 83/5)

Ia-1-6-3-2      second type of calibration means (claim 84/5)

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Ia-1-6-3-3      third type of calibration means (claim 85/5)

II.      **If invention [Ia-2] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-2-1            first type of identification means (claims 7-14/6)

Ia-2-2            second type of identification means (claims 14-20/6)

Ia-2-3            third type of identification means (claims 21-36/6)

Ia-2-4            fourth type of identification means (claims 37-47/6)

Ia-2-5            fifth type of identification means (claims 48-58/6)

Ia-2-6            sixth type of identification means (claims 59-86/6)

**If invention [Ia-2-3] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ia-2-3-1          first type of color portions (claims 22-26/6)

Ia-2-3-2          second type of color portions (claims 27-31/6)

Ia-2-3-3          third type of color portions (claims 32-36/6)

**If invention [Ia-2-4] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

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- Ia-2-4-1 first type of calibration means (claim 44/6)
- Ia-2-4-2 second type of calibration means (claim 45/6)
- Ia-2-4-3 third type of calibration means (claim 46/6)

**If invention [Ia-2-5] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ia-2-5-1 first type of calibration means (claim 55/6)
- Ia-2-5-2 second type of calibration means (claim 56/6)
- Ia-2-5-3 third type of calibration means (claim 57/6)

**If invention [Ia-2-6] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ia-2-6-1 first type of color portions (claims 60-68/5)
- Ia-2-6-2 second type of color portions (claim 69-77/5)
- Ia-2-6-3 third type of color portions (claim 78-86/5)

**If invention [Ia-2-6-1] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.



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- Ia-2-6-1-1 first type of calibration means (claim 65/6)
- Ia-2-6-1-2 second type of calibration means (claim 66/6)
- Ia-2-6-1-3 third type of calibration means (claim 67/6)

**If invention [Ia-2-6-2] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ia-2-6-2-1 first type of calibration means (claim 74/6)
- Ia-2-6-2-2 second type of calibration means (claim 75/6)
- Ia-2-6-2-3 third type of calibration means (claim 76/6)

**If invention [Ia-2-6-3] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ia-2-6-3-1 first type of calibration means (claim 83/6)
- Ia-2-6-3-2 second type of calibration means (claim 84/6)
- Ia-2-6-3-3 third type of calibration means (claim 85/6)

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4. **If invention Ib is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1 first type of identification mark arrangement (claims 90, 92-171/90, 185-191, 196, 192-193/185, 197-199/196, 207-213 and 214-215/207)

Ib-2 second type of identification mark arrangement (claims 91 and 92-171/91)

Currently, claims 87-89 are generic.

I. **If invention [Ib-1] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-1 first type of identification means (claims 92-98/90, 185-188, 192-193/185)

Ib-1-2 second type of identification means (claims 99-105/90, 189-191, 196, 197-199/196)

Ib-1-3 third type of identification means (claims 106-121/90, 207-213 and 214-215/207)

Ib-1-4 fourth type of identification means (claims 122-132/90)

Ib-1-5 fifth type of identification means (claims 133-143/90)

Ib-1-6 sixth type of identification means (claims 144-171/90)

**If invention [Ib-1-3] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-3-1 first type of color portions (claims 107-111/90, 208-210)

Ib-1-3-2 second type of color portions (claims 112-116/90)

Ib-1-3-3 third type of color portions (claims 117-121/90 and 211-213)

**If invention [Ib-1-4] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-4-1 first type of calibration means (claim 129/90)

Ib-1-4-2 second type of calibration means (claim 130/90)

Ib-1-4-3 third type of calibration means (claim 131/90)

**If invention [Ib-1-5] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-5-1 first type of calibration means (claim 140/90)

Ib-1-5-2 second type of calibration means (claim 141/90)

Ib-1-5-3 third type of calibration means (claim 142/90)

**If invention [Ib-1-6] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-6-1        first type of color portions (claims 145-153/90)

Ib-1-6-2        second type of color portions (claim 154-162/90)

Ib-1-6-3        third type of color portions (claim 163-171/90)

**If invention [Ib-1-6-1] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-6-1-1     first type of calibration means (claim 150/90)

Ib-1-6-1-2     second type of calibration means (claim 151/90)

Ib-1-6-1-3     third type of calibration means (claim 152/90)

**If invention [Ib-1-6-2] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-6-2-1     first type of calibration means (claim 159/90)

Ib-1-6-2-2     second type of calibration means (claim 160/90)

Ib-1-6-2-3     third type of calibration means (claim 161/90)

**If invention [Ib-1-6-3] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-1-6-3-1      first type of calibration means (claim 168/90)

Ib-1-6-3-2      second type of calibration means (claim 169/90)

Ib-1-6-3-3      third type of calibration means (claim 170/90)

II.      **If invention [Ib-2] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-2-1            first type of identification means (claims 92-98/91)

Ib-2-2            second type of identification means (claims 99-105/91)

Ib-2-3            third type of identification means (claims 106-121/91)

Ib-2-4            fourth type of identification means (claims 122-132/91)

Ib-2-5            fifth type of identification means (claims 133-143/91)

Ib-2-6            sixth type of identification means (claims 144-171/91)

**If invention [Ib-2-3] is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

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- Ib-2-3-1 first type of color portions (claims 107-111/91)
- Ib-2-3-2 second type of color portions (claims 112-116/91)
- Ib-2-3-3 third type of color portions (claims 117-121/91)

**If invention [Ib-2-4] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ib-2-4-1 first type of calibration means (claim 129/91)
- Ib-2-4-2 second type of calibration means (claim 130/91)
- Ib-2-4-3 third type of calibration means (claim 131/91)

**If invention [Ib-2-5] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ib-2-5-1 first type of calibration means (claim 140/91)
- Ib-2-5-2 second type of calibration means (claim 141/91)
- Ib-2-5-3 third type of calibration means (claim 142/91)

**If invention [Ib-2-6] is elected, applicant is further required under 35**

U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

- Ib-2-6-1 first type of color portions (claims 145-153/91)

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Ib-2-6-2        second type of color portions (claim 154-162/91)

Ib-2-6-3        third type of color portions (claim 163-171/91)

**If invention [Ib-2-6-1] is elected, applicant is further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.**

Ib-2-6-1-1      first type of calibration means (claim 150/91)

Ib-2-6-1-2      second type of calibration means (claim 151/91)

Ib-2-6-1-3      third type of calibration means (claim 152/91)

**If invention [Ib-2-6-2] is elected, applicant is further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.**

Ib-2-6-2-1      first type of calibration means (claim 159/91)

Ib-2-6-2-2      second type of calibration means (claim 160/91)

Ib-2-6-2-3      third type of calibration means (claim 161/91)

**If invention [Ib-2-6-3] is elected, applicant is further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to**

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which the claims shall be restricted if no generic claim is finally held to be allowable.

Ib-2-6-3-1 first type of calibration means (claim 168/91)

Ib-2-6-3-2 second type of calibration means (claim 169/91)

Ib-2-6-3-3 third type of calibration means (claim 170/91)

5. **If invention II is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

IIa reflective type detection (claims 223-231 and 235).

IIb transmissive type detection (claims 232-234 and 236-238).

IIc a light source arrangement (claims 239-241)

IId photographic detection (claims 242-247)

Currently, claim 222 is generic.

I. **If invention IIa is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

IIa-1 first type of identification means (claims 223-225 and 235)

IIa-2 second type of identification means (claims 226-228)

IIa-3 third type of identification means (claims 229-231)



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II. **If invention IIb is elected**, applicant is **further** required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

IIb-1 first type of identification means (claims 233 and 234)

IIb-2 second type of identification means (claims 236-238)

6. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin Pyo  
Primary Examiner  
Art Unit 2878

Pkk  
6/29/05